#### PATENT COOPERATION TREATY

PCT   Revel 4 The Quadrant   William Street   PERTH WA 6000   Date of mailing (day/month/year)   Q4 NOV 2005   (PCT Rule 43bis.1)   Date of mailing (day/month/year)   Q4 NOV 2005   (PCT Rule 43bis.1)   Date of mailing (day/month/year)   Q4 NOV 2005   (PCT Rule 43bis.1)   Date of mailing (day/month/year)   Q4 NOV 2005   Priority date (day/month/year)   See paragraph 2 below   PCT/A12005/5001344   September 2005   September 2004   International application No.   Priority date (day/month/year)   Priority date (day/month/yea	From the: INTERNATIONAL SEARCHING AUTHORITY		·			
WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)  Date of mailing (day/month/year)  Applicant's or agent's file reference 115775.JHK  International application No. PCT/AU2005/001344  International application No. PCT/AU2005/001344  International application No. PCT/AU2005/001344  International application No. PCT/AU2005/001344  International application (PC) or both national classification and IPC  Int. Ct.	То:	- 2 -		PCT		
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Applicant's or agent's file reference  115775:JHK  International application No. PCT/AU2005/001344  5 September 2005  International application No. PCT/AU2005/001344  5 September 2005  International Patient Classification (IPC) or both national classification and IPC Int. Cl. 7 E21B 25/16, 47/024, 47/09  Applicant  AUSTRALIAN MUD COMPANY LTD et al  1. This opinion contains indications relating to the following items:  Box No. 11 Basis of the opinion Box No. 11 Box No. 11 Priority Box No. 11 Non-establishment of opinion with regard to novelty, inventive step and industrial applicability Box No. 10 Lack of unity of invention Box No. 11 Non-establishment of opinion with regard to novelty, inventive step or industrial applicability; claims and explanations supporting such statement Box No. V1 Certain documents cited Box No. V1 Certain documents cited Box No. V1 Certain observations on the international application Box No. VII Certain observations on the international application Certain documents cited Box No. VII Certain docu	4					
Applicant's or agent's file reference   FOR FURTHER ACTION   See paragraph 2 below				(PCT Rule 43bis.1)		
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PCT/AU2005/001344   5 September 2005   3 September 2004						
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AUSTRALIAN MUD COMPANY LTD et al  1. This opinion contains indications relating to the following items:    X	_	ar orassino				
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Sox No. I   Basis of the opinion   Box No. II   Priority	AUSTRALIAN MUD COMPANY LTD e	t al				
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Box No. II Priority  Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  Box No. IV Lack of unity of invention  Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement  Certain documents cited  Box No. VI Certain documents cited  Box No. VIII Certain defects in the international application  7. FURTHER ACTION  If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant cifooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.  If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 before the expiration of 22 months from the priority date, whichever expires later.  For further options, see Form PCT/ISA/220.  Name and mailing address of the IPEA/AU  Authorized Officer  S. GHOSH  Talenkare No. (00) 6283 2163		onowing in				
Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability    Box No. IV   Lack of unity of invention			• .			
Box No. IV   Lack of unity of invention		rith regard to	novelty, inventive step a	nd industrial applicability		
Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement    Box No. VI   Certain documents cited     Box No. VII   Certain defects in the international application     Rox No. VIII   Certain observations on the international application	<u></u>					
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AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au  Tolenberg No. (02) 6283 2163	3. For further details, see notes to Form PGT/ISA/220.					
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PO BOX 200, WODEN ACT 2606, AUSTRALIA  E-mail address: pct@ipaustralia.gov.au  S. GHOSH  Tolenberg No. (02) 6283 2163	-		Authorized Officer			
E-mail address: pct@ipaustralia.gov.au		S. GHOSH				
1 4 CONTINUE TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYP				5283 2163		

International application No.

PCT/AU2005/001344

Box	No. I Basis of the opinion
1.	With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
	This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2.	With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
	a. type of material
	a sequence listing
	table(s) related to the sequence listing
	b. format of material
	in written format
	in computer readable form
	c. time of filing/furnishing
	contained in the international application as filed.
	filed together with the international application in computer readable form.
	furnished subsequently to this Authority for the purposes of search.
3.	In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4.	Additional comments:

International application No.

PCT/AU2005/001344

Box	No. IV Lack of unity of invention	
1.	X In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:	
	X paid additional fees	
	paid additional fees under protest	
	not paid additional fees	
2.	This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.	
3.	This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is	
	complied with	
	X not complied with for the following reasons:	
1.	Claims 1 to 23 are directed to a core drill having a core orientation device, the core orientation device for the core drill and a method of obtaining and orientating a core sample. It is considered that an arrangement for providing signals associated with a physical orientation of the core orientation device, processing means for processing the signals to establish a measure of the physical orientation of the core orientation device at a particular moment in time, means for storing data and means to provide the measure of the physical orientation of the core orientation device when required comprises a first "special technical feature".	
2.	Claims 24 to 31 are directed to an orientation device and a method for providing an indication of the orientation of a core sample relative to a body of material from which the core sample has been extracted. It is considered that means for determining and storing the orientation of the device at predetermined time intervals relative to a reference time, means for inputting a selected time interval, means for relating the selected time interval to one of the predetermined time intervals and providing an indication of the orientation device at the selected time interval comprises a second "special technical feature".	
relat	e the abovementioned groups of claims do not share any of the technical features identified, a "technical ionship" between the inventions, as defined in PCT rule 13.2 does not exist. Accordingly the international ication does not relate to one invention or to a single inventive concept, a priori.	1
4. (	Consequently, this opinion has been established in respect of the following parts of the international application:	
	X all parts	
	the parts relating to claims Nos.	

International application No.

PCT/AU2005/001344

Box No. V	Reasoned statement un applicability; citations	der Rule 4 and explar	l3 <i>bis</i> .1(a)(i) w nations suppo	vith regard to orting such st	novelty, inver	itive step or ii	ídustrial
1. Statement		-			·	A BOOK OF THE STREET	
No	ovelty (N)	Claims	1-33		p. de	r	YES
		Claims					NO .
In	ventive step (IS)	Claims	1-33			$\langle \rangle$	YES
		Claims			15	1	NO .
In	dustrial applicability (IA)	Claims	1-33	1		V.	YES
·		Claims					NO

#### 2. Citations and explanations:

The following documents identified in the International Search Report have been considered for the purposes of this opinion:

D1: CA 2456506 D2: US 5105894 D3: RU/2160821

#### Novelty (N) and Inventive Step (IS) Claims/1-33

Neither of the documents D2 and D3 (both published before the priority date) do not disclose all of the features of claims 1 -33.

Therefore the subject matter of these claims is new and is not obvious and, as such meets the requirements of Articles 33(2) and 33(3) of the PCT with regard to novelty and inventive step, respectively.

With regard to the document(s) listed in Box VI under "certain documents cited", these are documents published prior to the international filing date but later than the priority date claimed but which would otherwise be considered to be of particular relevance.

Under the PCT, novelty is considered only in respect of documents published before the priority date. The relevance of a document/published after the priority date is dependent upon national law. Such documents are excluded from consideration in preliminary examination, under the PCT Guidelines but have been included here for information.

#### Industrial Applicability (IA)

The invention defined in the claims is considered to meet the requirements of Industrial Applicability under Article 33(4) of the PQT because it can be made by, or used in, industry.

International application No.

PCT/AU2005/001344

ox No. VI Certain document	s cited		
Certain published documents (Ru	ales 43bis.1 and 70.10)	·	
Application No.  Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
P, X CA 2456506	.3 January 2005	3 February 2004	3 February 2004
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This document discloses all of the and 19 (although not disclosed) whole document.			
•			
Non-written disclosures (Rules 4	3 <i>bis</i> .1 and 70.9)		
Non-written disclosures (Rules 4 Kind of non-written disclosure	Date of non-v	vritten disclosure onth/year) refe	Date of written disclosure rring to non-written disclosure (day/month/vear)
	Date of non-v		
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Kind of non-written disclosure	Date of non-v	onth/year) refe	rring to non-written disclosure (day/month/year)
Kind of non-written disclosure	Date of non-v	onth/year) refe	rring to non-written disclosure (day/month/year)

International application No.

PCT/AU2005/001344

Box No. VIII	Certain observations on the international application			
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The following o	bservations on the clarity of the claims, description, and drawings or on the que	stion whether the claims are f	ully	

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- 1. Claim 11 lacks clarity in that the scope of term "integration means" cannot be clearly ascertained.

  A similar observation applies to claims 13 and 21 with regard to "means for maintaining knowledge".
- 2. Claim 20 commences with the words "According to a third aspect ....". It should perhaps define "A method of obtaining ....".